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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/536,885

05/31/2005

Ebrahim Firoozabady

63-000600US

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04/30/2008

QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.

P O BOX 458

ALAMEDA, CA 94501

EXAMINER

KALLIS, RUSSELL

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/536,885	<b>Applicant(s)</b> FIROOZABADY, EBRAHIM	
	<b>Examiner</b> RUSSELL KALLIS	<b>Art Unit</b> 1638	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5,10,17,18,21-23,26,27,31,36,43-47 and 50-52 is/are pending in the application.

4a) Of the above claim(s) 26,27,31,36,43-47 and 50-52 is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1,5,10,17,18 and 21-23 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/07;7/07;7/07</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I, claims 1, 5, 10, 17-18 and 21-23 in the reply filed on 1/22/2008 is acknowledged.

Claims 1, 5, 10, 17, 18, 21-23, 26, 27, 31, 36, 43-47 and 50-52 are pending. Claims 26, 27, 31, 36, 43-47 and 50-52 are withdrawn. Claims 1, 5, 10, 17, 18, and 21-23 are examined.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 5, 10, 17, 18, and 21-22 are rejected under 35 U.S.C. 102(a) as being anticipated by Mezzetti B. *et al.* BMC Biotechnology; Vol. 2, no: 18 published 9/27/2002.

The claims are broadly drawn to a method of producing transformed plant cells comprising culturing non-apical meristematic cells to produce organogenic cells and then transforming the organogenic cells.

Mezzetti teaches culturing a meristematic bulk by excision of the apical dome of the shoots and maintaining the basal bulk that arise following excision of the apical meristem and then transforming slices of the meristematic bulk with an exogenous DefH9-iaaM gene that has homology to the endogenous IAA coding region of grape, and regenerating whole plants therefrom (see abstract and results on page 2); and thus the reference teaches all the limitations of claims 1, 5, 10, 17, 18, and 21-22.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 10, 17, 18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazzetti in view of U.S. 6,653,530 filed February 13, 1998.

The claims are broadly drawn to a method of producing transformed plant cells comprising culturing non-apical meristematic cells to produce organogenic cells and then transforming the organogenic cells; wherein the heterologous polynucleotide encodes a polypeptide from the carotenoid biosynthetic pathway.

Mazzetti teaches culturing a meristematic bulk by excision of the apical dome of the shoots and maintaining the basal bulk that arise following excision of the apical meristem and then transforming slices of the meristematic bulk with an exogenous DefH9-iaaM gene that has homology to the endogenous IAA coding region of grape, and regenerating whole plants therefrom (see abstract and results on page 2); and thus the reference teaches all the limitations of claims 1, 5, 10, 17, 18, and 21-22.

Mazzetti does not teach a heterologous polynucleotide encodes a polypeptide from the carotenoid biosynthetic pathway.

U.S. Patent 6,653,530 teaches grape transformed with phytoene synthase (see claims 1, 6, 14-19 and 22)

It would have been obvious at the time of filing to use the culturing method of Mazzetti to generate transgenic plants to obtain increased levels of carotenoids in transformed plants as taught by the '530 patent. One of ordinary skill would have been motivated by the success of Mazzetti in generating transformed grape from non-apical meristematic tissue and by the success of the '530 patent in synthesizing carotenoid compounds in transformed plants; and would have realized that engineering carotenoid biosynthesis is a valuable tool for genetic modification of grapes and wine and would have a reasonable expectation of success of combining the two to yield transformed grapes that produce altered carotenoid profiles given the success of both Mazzetti and the '530 patent.

No claim is allowed.

Art Unit: 1638

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUSSELL KALLIS whose telephone number is (571)272-0798. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Russell Kallis/  
Primary Examiner, Art Unit 1638  
April 27, 2008